#### Web based paper form verification using queXF

#### IFD&TC 2010

Presentations And Discussion: Commercial Software for Web Questionnaires

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### What is web based paper form verification?

Data entry from paper forms using a web browser

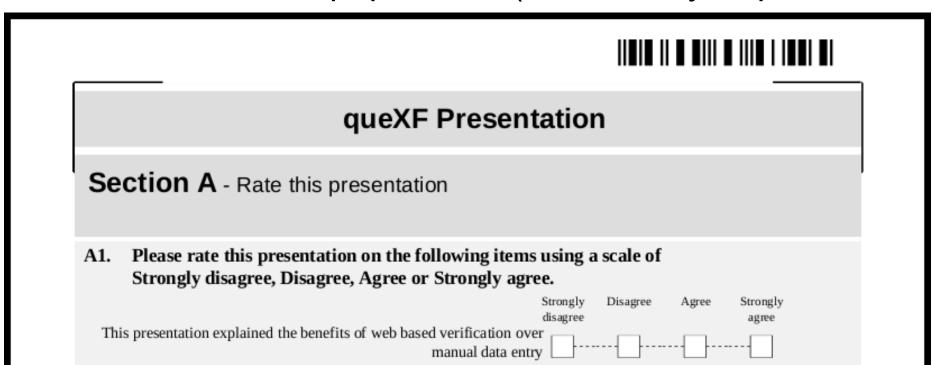
- 1. A template (blank form) is scanned
- 2. Template is "banded"
- 3. Completed paper forms are scanned
- 4. System "guesses" responses using Optical Mark Recognition (OMR) and then allows an operator to confirm or modify the response using a web browser
- 5. Data can be exported as a CSV file, SPSS, DDI v2.0

## What is queXF

- Open Source web based form verification system
  - Open Source
  - o Free!
  - Can be modified/customised
- Runs on any web server that supports PHP and MySQL (most of them)
- Commercial support available if required

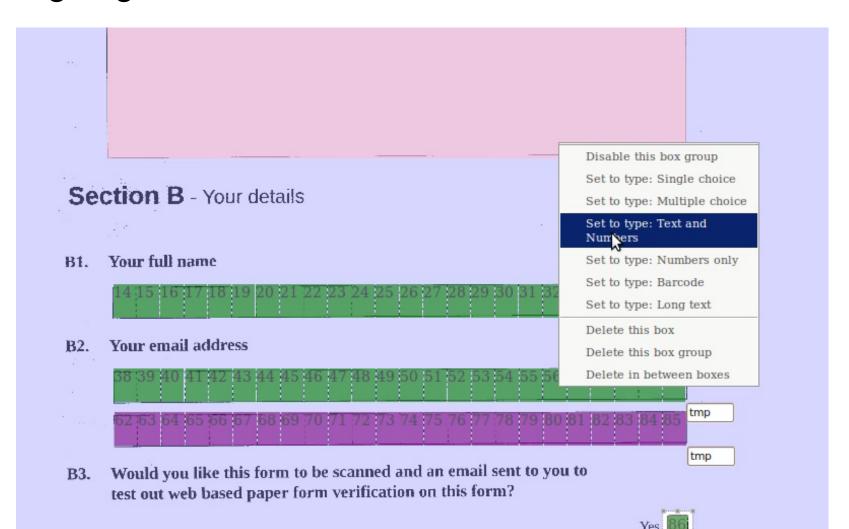
### 1. The paper form

- To be processed, a form must have
  - A barcode on each page identifying that page and form (not individual)
  - "Corner lines" for page alignment
  - Boxes with a similar width outline
- Tools to create the paper form (Limesurvey + queXML tools)



# 2. Creating the template or "Banding"

 Process of marking fields as containing types of data and assigning them variable names



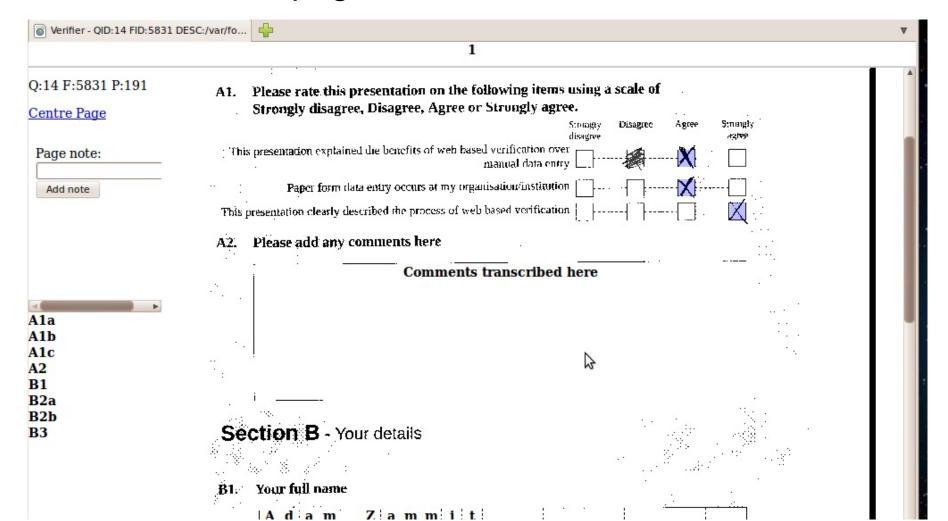
## 3. Scanning completed forms

- Forms scanned to PDF file
- Files uploaded to web server
- Files automatically batch processed by system
  - OMR is done on forms
  - First pass (computers guess) of verification stored



### 4. Verification

- Verification appears as an "overlay" on the scanned page
- Verification is done by pressing Enter to confirm a field is correct, or selecting the appropriate response
- Possible to add page notes



### 5. Administrative functions

- Assigning forms to operators
- Missing page handling
- Reviewing performance of operators

#### IFDTC queXF Presentation

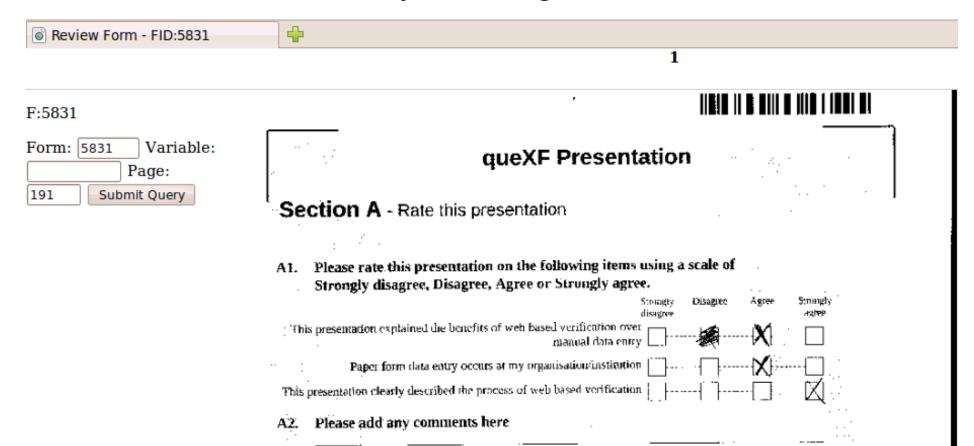
Operator	Completed Forms	<b>Completions Per Hour</b>	Pages Per Hour
Adam Zammit	1	28.3465	28.3465

- Page notes output
- Data output

	Α	В	С	D	E	F	G	Н	- 1	J	
1	A1a	A1b	A1c	A2	B1	B2a	B2b	<b>B3</b>	formid		
2	3	3	4	Comments transcribed here	Adam Zammit	adam.zammit@acspri.org.a	u	1	5831		
3											
4											
5											

#### Data user review functions

- Review paper forms based on formId variable in data
  - Password protected and limited to data for that user
  - Can see the form page where the data was entered from in a web browser by entering in the formID



## Comparison with CADE

#### Pro's

- Acts as a form repository so physical forms may be archived/destroyed
- Can be done anywhere with an Internet connection (once forms scanned in)
- Faster
- Possible to review w/o having physical access to paper form
- Performance measures built in

#### Con's

- Forms must be produced in a scan-able form (barcodes/etc)
- Forms must be scanned
- Additional software to install/maintain

### Questions

- Questions
- Please fill in and return your form if you would like me to send you an invitation to test verification using your browser